DRAFT REGULATORY GUIDANCE
FOR EARLY SITE PERMIT (ESP) REVIEW STANDARD
(FOR POSSIBLE FUTURE INCLUSION IN NUREG-0800)

13.3 EMERGENCY PLANNING

13.3.1 EARLY SITE PERMITS

REVIEW RESPONSIBILITIES

Primary - Equipment and Human Performance Branch (IEHB)

Secondary - None

I. AREAS OF REVIEW

The emergency planning aspects of an early site permit (ESP) application will be reviewed by the Nuclear Regulatory Commission (NRC) for compliance with the applicable requirements of 10 CFR 50.47 (Emergency plans), Appendix E to 10 CFR Part 50 (Emergency Planning and Preparedness for Production and Utilization Facilities), and Subpart A to 10 CFR Part 52 (Early Site Permits). Compliance with these regulations will be determined utilizing the guidance of Regulatory Guide 1.101 (Emergency Planning and Preparedness for Nuclear Power Reactors), which endorses Revision 1 of NUREG-0654/FEMA-REP-1 (NUREG-0654), and through it NUREG-0696 (Functional Criteria for Emergency Response Facilities), as providing acceptable methods for implementing specific parts of the Commission's regulations. Supplement 2 to NUREG-0654 (Criteria for Emergency Planning in an Early Site Permit Application) will be used as guidance for the review of radiological emergency information and plans submitted with an early site permit application under Subpart A of 10 CFR Part 52. The NRC will consult with the Federal Emergency Management Agency (FEMA) regarding offsite emergency plans, in accordance with a September 7, 1993, Memorandum of Understanding.

II. ACCEPTANCE CRITERIA

The acceptance criteria for emergency planning information submitted in an ESP application are contained in 10 CFR 52.17(b).

The minimum acceptance criteria for all ESP applications are in 10 CFR 52.17(b)(1), and require that all applicants must identify physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans. Applicants providing only the information required by 10 CFR 52.17(b)(1) must also provide a description of contacts and arrangements made with local, state, and federal governmental agencies with emergency planning responsibilities.

The applicant may choose to submit additional emergency planning information in the ESP application, which would be subject to the two optional acceptance criteria in 10 CFR 52.17(b)(2), in addition to the mandatory acceptance criteria in 10 CFR 52.17(b)(1), as described above. The two options allow an applicant to submit either major features of the emergency plans, or complete and integrated emergency plans. While neither option is required, each would provide for a more definitive emergency plan finding at the ESP stage.

1. IDENTIFICATION OF PHYSICAL CHARACTERISTICS

The ESP application must identify physical characteristics unique to the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans. For example, an ESP application may identify such unique physical characteristics by performing a preliminary analysis of the time required to evacuate various sectors and distances within the plume exposure pathway emergency planning zone (EPZ) for transient and permanent populations, noting major impediments to evacuation or the taking of other protective actions.

In addition, an ESP application providing only the information required by
10 CFR 52.17(b)(1) must include a description of contacts and arrangements made with local, state, and federal agencies with emergency planning responsibilities. The descriptions should include the names and locations of the organizations contacted, the titles and/or positions of the person(s) contacted, and the roles of the organizations in emergency planning.

2. MAJOR FEATURES OF THE EMERGENCY PLANS

In addition to the minimum requirements of identifying physical characteristics and offsite agencies, as described above, the ESP applicant may include proposed major features of the emergency plans, such as the exact sizes of the EPZs, for review and approval by the NRC, in consultation with FEMA, in the absence of complete and integrated plans.

Additional guidance concerning contacts and arrangements for this option are specified in the evaluation criteria of Section V of Supp. 2 to NUREG-0654.

3. COMPLETE AND INTEGRATED EMERGENCY PLANS

In addition to the mandatory requirement of identifying unique physical characteristics, an ESP applicant may propose complete and integrated emergency plans for review and approval by the NRC, in consultation with FEMA, in accordance with the applicable provisions of 10 CFR 50.47. The planning standards and evaluation criteria for the preparation and evaluation of these plans are provided in NUREG-0654.

Under this option, the applicant shall make good faith efforts to obtain from the same governmental agencies as described in the "Identification of Physical Characteristics" section above, certifications that (1) the proposed emergency plans are practicable; (2) these agencies are committed to participating in any further development of the plans, including any required field demonstrations, and (3) these agencies are committed to executing their responsibilities under the plans in the event of an emergency. The application must contain any certifications that have been obtained. If these certifications cannot be obtained, the application must contain information, including a utility plan, sufficient to show that the proposed plans nonetheless provide reasonable assurance that adequate protective measures can and will be taken, in the event of a radiological emergency at the site. The utility plan will be evaluated using Supplement 1 of NUREG-0654.

III. REVIEW PROCEDURES

1. IDENTIFICATION OF PHYSICAL CHARACTERISTICS

If the applicant chooses to provide only the minimum required information, the NRC staff will review, in consultation with FEMA, the adequacy of the information provided in the application to determine whether the identified unique physical characteristics do, or do not, pose a significant impediment to the development of emergency plans.

2. MAJOR FEATURES OF THE EMERGENCY PLANS

An ESP application that includes the major features of emergency plans will be reviewed by the NRC staff, in consultation with

FEMA, and evaluated against the selected and modified emergency planning standards and evaluation criteria from Section II of NUREG-0654. These standards and criteria are specified in Section V of Supp. 2 to NUREG-0654, and have been selected to:

- highlight the need for cooperation among the applicant, local, state, and federal agencies, described in 10 CFR 52.17(b)(3);

- address potential emergency planning issues early in the licensing process, before large commitments of resources are made; and

- reflect that an ESP applicant may not have information and resources, or should not be expected to expend large resources, on aspects of emergency planning and preparedness that will be required, and may be more easily addressed, at the combined license stage.

In addition, the NRC staff will review the ESP application against the standards and criteria in Section V of Supp. 2, referring to facilities, systems and equipment. These standards and criteria have been modified from Section II of NUREG-0654 to provide for descriptions only, rather than in-place capability. The modifications to the emergency planning standards and evaluation criteria in Section V of Supp. 2 apply only to an ESP application.

All of the planning standards of 10 CFR 50.47(b), as supported in NUREG-0654, must be met before the issuance of an operating license under 10 CFR 50.57, or a combined license under Subpart C of 10 CFR Part 52. In addition, for the first reactor at a site, Appendix E of 10 CFR Part 50 requires that a full participation exercise be conducted within 2 years before the NRC issues an operating license for full power (i.e., one authorizing operation above 5 percent of rated power). Since this exercise would be included in the inspections, tests, and analyses required for a combined license, it would have to be satisfied before fuel loading for a combined license.

3. COMPLETE AND INTEGRATED EMERGENCY PLANS

As stated in 10 CFR 52.17(b)(2)(ii), an applicant for an ESP may propose complete and integrated emergency plans for review and approval by the NRC, in consultation with FEMA, in accordance with the applicable provisions of 10 CFR 50.47. The planning standards and evaluation criteria for the preparation and evaluation of these plans are provided in NUREG-0654/FEMA-REP-1, Rev. 1.

IV. EVALUATION FINDINGS

The desired evaluation findings for the emergency planning information submitted in an ESP application should be substantially equivalent to the following statements for each of the submittal areas.

1. IDENTIFICATION OF PHYSICAL CHARACTERISTICS

The staff has reviewed the physical characteristics unique to the proposed site and the description identified in the [indicate applicant] Early Site Permit (ESP) application for [indicate site name]. The staff finds, after consultation with FEMA, that [summarize important evaluation review findings]. Accordingly, the staff concludes that there are no significant impediments to the development of emergency plans.

2. MAJOR FEATURES OF THE EMERGENCY PLANS

The staff has reviewed the proposed major features of the emergency plans, provided in the [indicate applicant] Early Site Permit (ESP) application for [indicate site name], against the applicable criteria in Regulatory Guide 1.101, NUREG-0696 and Supplement 2 of NUREG-0654. As set forth above, the staff finds, after consultation with FEMA, that each proposed major feature of the emergency plans meet the applicable acceptance criteria. Therefore, the staff finds that the proposed major features of the emergency plans, in the absence of complete and integrated emergency plans, are acceptable.

3. COMPLETE AND INTEGRATED EMERGENCY PLANS

The staff has reviewed the complete and integrated emergency plans, provided in the [indicate applicant] Early Site Permit (ESP) application for [indicate site name], against the applicable criteria in Regulatory Guide 1.101, NUREG-0654 and NUREG-0696. For the reasons set forth above, the staff finds the following:

Provided the items identified as required conditions of the early site permit are accomplished, the onsite emergency plans are adequate and meet the requirements of 10 CFR 50.47(b), Appendix E to Part 50, and Subpart A of 10 CFR Part 52, and there is reasonable assurance that they can be implemented.

[list the required conditions of the early site permit]

The Federal Emergency Management Agency (FEMA) has provided interim findings and determinations on the offsite emergency plans and the adequacy of certifications from the applicable local, state and federal governmental agencies with emergency planning responsibilities, identified in accordance with 10 CFR 52.17(b)(3). FEMA finds that the offsite emergency plans for [indicate site name] are adequate to cope with a radiological emergency, and there is reasonable assurance that they can be implemented.

For the reasons set forth above, the NRC staff finds that, in view of [indicate applicant] onsite emergency plans for [indicate site name], and the FEMA findings and determinations for the offsite emergency plans, there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at [indicate site name].

V. IMPLEMENTATION

The following is intended to provide guidance to applicants and licensees regarding the NRC staff's plan for using this Standard Review Plan (SRP) section.

This SRP section will be used by the staff when performing safety evaluations of ESP applications submitted pursuant to 10 CFR Part 52. Except in those cases in which the applicant proposes an acceptable alternative method for complying with specified portions of the NRC's regulations, the methods described herein will be used by the NRC staff, in its evaluation of the emergency planning information contained in an ESP application, to ensure compliance with all applicable NRC requirements.

Implementation schedules for conformance to parts of the methods discussed herein are contained in the referenced materials.

VI. REFERENCES

1. 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities."

2. 10 CFR Part 50, Appendix E, “Emergency Planning and Preparedness for Production and Utilization Facilities.”

3. 10 CFR Part 52, “Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Plants.”

4. 44 CFR Part 350, “Review and Approval of State and Local Radiological Emergency Plans and Preparedness.”

5. Regulatory Guide 1.101, Rev. 3, “Emergency Planning and Preparedness for Nuclear Reactors,” August 1992.

6. Regulatory Guide 1.70, “Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants,” November 1980.

7. NUREG-0654/FEMA-REP-1, Rev. 1, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” November 1980.

8. Supplement 1 of NUREG-0654/FEMA-REP-1, Rev. 1, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants - Criteria for Utility Offsite Planning and Preparedness - Draft Report for Interim Use and Comment,” November 1987.

9. Supplement 2 of NUREG-0654/FEMA-REP-1, Rev. 1, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants - Criteria for Emergency Planning in an Early Site Permit Application - Draft Report for Comment,” April 1996.

10. NUREG-0696, “Functional Criteria for Emergency Response Facilities,” February 1981.

11. EPA 400-R-92-001, “Manual of Protective Action Guides and Protective Actions for Nuclear Incidents,” May 1992.

12. NRC/FEMA Memorandum of Understanding, September 7, 1993 (58 FR 47996, September 14, 1993).